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PROTOCHORDATA

COMPILED BY

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14. PROTOCHORDATA

INCLUDING

ENTEROPNEUSTA, PTEROBRANCHIA, POGONOPHORA AND PHORONIDEA

BY

D. B. CARLISLE, M.A., D.Phil.

Evidence has been accumulating in recent years that the Graptolita are closely related to the Pterobranchia and not to the Coelenterata, with which they have been traditionally associated. From 1960, therefore, papers on Graptolita will be recorded in this section. Up to and including 1959 they will be recorded in Section 4 Coelenterata, where they have always been placed.

I.—TITLES

The year of publication is omitted where it is the same as the volume year of the "Record" namely (1957).

Abrikov, C. C. On the new type of invertebrates—Pogonophora. Adv. mod. Biol. Moscow **44** 2 : 232–240 7 figs. [Russian.]

Alvariño, A. (1). Estudio del zooplancton de Mediterraneo Oxidentale. Bol. Inst. exp. Oceanogr. No. **81**.

Alvariño, A. (2). Zooplancton del Atlántico Iberico. Bol. Inst. esp. Oceanogr. No. **82**.

Anderson, J. M. see Guthrie, M. J.

Arzt, T. Die Erforschungsgeschichte der Chorda dorsalis und die Entstehung des Chordaten-Begriffes im 19. Jahrhundert. Nova Acta Leop. N.S. **17**, 121 1955 : 357–409.

Barrett, J. H. see Bassindale, R.

Barrington, E. J. W. The distribution and significance of organically bound iodine in the ascidian *Ciona intestinalis* Linnaeus. J. mar. biol. Ass. U.K. **36** : 1–16, 1 pl. 1 fig.

Barrington, E. J. W. & Franchi, L. L. Organic binding of iodine in the endostyle of *Ciona intestinalis*. Nature, Lond. **177** 1956 : 432.

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VOL. 94

Bassindale, R. & Barrett, J. H. The Dale Fort marine fauna. Proc. Bristol Nat. Soc. **29** : 227–328 3 figs.

Berg, W. E. Chemical analyses of anterior and posterior blastomeres of *Ciona intestinalis*. Biol. Bull. Woods Hole **113** : 365–375 2 figs.

Björnberg, T. K. S. (1). The occurrence of *Amphioxides pelagicus* (Günther) in the Fernand de Noronha Island plankton. Bol. Inst. oceanogr. S. Paulo **5** 1954 : 83–86 1 fig.

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Björnberg, T. K. S. & Forneris, L. Resultados científicos do cruzeiro do "Bacpendé" e do "Vega" à ilha de Trindade. Copelata 1. Publ. avuls. Inst. oceanogr. S. Paulo. Oceanogr. Biol. No. **1** 1955 : 1–68 17 pls.

Brewin, B. I. Ascidians of New Zealand. Part X. Ascidians from North Auckland. Trans. roy. Soc. N.Z. **84** : 577–580 3 figs.

Burdon-Jones, C. Hemichordata. Enteropneusta. Family : Ptychoderidae. Tornaria larvae. Fich. Ident. Zool. Sheet **70** : 1–6.

Ceccatty, M. P. de. Les activités sécrétices du système nerveux central de l'*Amphioxus*. C.R. Acad. Sci. Paris **244** : 2645-2647.

Colwin, A. L., Colwin, L. H. & Philpott, R. E. Electron microscope studies of early stages of sperm penetration in *Hydroides hexagonus* (Annelida) and *Saccoglossus kowalevskii* (Enteropneusta). J. biophys. biochem. Cytol. **3** : 489-502 4 pl.

Colwin, L. H. see Colwin, A. L.

Dalq, A. M. La métachromasie *in vivo* au bleu de toluidine dans l'oeuf et l'embryon d'Ascidie. Bull. Soc. zool. Fr. **82** : 296-316 10 figs.

Davis, C. C. The Marine and Fresh-water Plankton (Ann Arbor) 1955 : i-ix, 1-562 681 figs.

Deckert, K. Acrania see Stresemann pp. 467-8.

Deflandre, G. & Deflandre-Rigaud, M. *Micraspidites* manip. nov., sclérites de Didemnidés (Ascidies, Tunicier) fossile du Lutétien du Bassin parisien et du Balcombien d'Australie. C.R. Soc. géol. Fr. **1956** : 47-9 figs. 1-5.

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Forneris, L. (1). The geographical distribution of the Copelata. Ann. Acad. bras. Cienc. **29** : 273-284.

Forneris, L. (2). Phoronidea. Family Phoronidae. Actinotroch larvae. Fich. Ident. Zoopl. Sheet **69** : 1-4.

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Franchi, L. L. see Barrington, E. J. W.

Franzén, A. On spermiogenesis, morphology of the spermatozoon, and biology of fertilization among invertebrates. Zool. Bidr. Uppsala **31** : 355-482 6 pls. 223 figs.

Gautier, Y. V. Bionomie du Banc de Magaud. Rec. Trav. Stat. mar. Endoume **21** : 28-40.

Gideon, P. W., Menon, P. K. B., Rao, S. R. V. & Jose, K. V. On the marine fauna of Gulf of Kutch : A preliminary survey. J. Bombay nat. Hist. Soc. **54** : 690-706 1 pl. 5 figs. map.

Glover, R. S. An ecological survey of the drift-net herring fishery off the north-east coast of Scotland. Bull. mar. Ecol. **5** (39) : 1-43 8 pls. 6 figs.

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Grosch, D. S. & Smith, Z. H. X-ray experiments with *Molgula manhattanensis* : adult sensitivity and induced zygotic lethality. Biol. Bull. Woods Hole **112** : 171-179.

Gruner, H.-E. Tunicata see Stresemann, pp. 462-6.

Guthrie, M. J. & Anderson, J. M. General Zoology. New York (John Wiley & Sons), pp. xv+708 1 chart text illust.

- Hattori, S.** *see* Nakai, Z.
- Honjo, K.** *see* Nakai, Z.
- Ikomoto, N.** *see* Kawaguti, S.
- Ionkov, V. I.** Impressions of the lower Sarmatian Ascidiae. *Priroda* **6** : 97-98 2 figs. [Russian.]
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- Kluge, H.** On the occurrence of *Rhabdopleura* in the Barents Sea. *Trud. Murmansk. Biol. Sta. Acad. Nauk.* **1** 1948 : 276-283. [Russian.]
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- Mawatari, S. & Kobayashi, S.** Seasonal settlement of animal fouling organisms in Ago Bay, middle part of Japan I. *Misc. Rep. Res. Inst. nat. Resour. Tokyo, No.* **35** 1954 : 37-47 11 figs. *No.* **36** 1954 : 1-8 2 pls. 6 figs.
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- Millar, R. H. (1).** Ascidians from Mozambique, East Africa. *Ann. Mag. nat. Hist.* (12) **9** : 913-932 15 figs.
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Rao, K. P. (1). Enteropneusta from Madras and the Gulf of Manaar, with a note of the probable course of distribution of *Ptychodera flava* Eschscholtz. *Proc. Indian sci. Congr. sci. Congr. Ass.* **44** 1955 : 301. [Abstract].

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Trégouboff, G. (4). Embranchement des Cephalocordés. See Trégouboff, G. & Rose, M. pp. 575-9 pl. 207.

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II.—SUBJECT INDEX

Reference to "Titles" is by the name(s) of the Author(s).

EVOLUTION & GENETICS

Phylogeny. — of chordates : WHITEAR.

BRACHIATA

POGONOPHORA

GENERAL

Collections. — IVANOV (1).

STRUCTURE

Adult. — Abrikov, IVANOV (1).

DEVELOPMENT

Embryology. — IVANOV (3), JÄGER-STEN.

EVOLUTION & GENETICS

Phylogeny.—IVANOV (1, 2).

PHORONIDEA**GENERAL**

Fauna lists—English Channel : MARINE BIOLOGICAL ASSOCIATION OF THE U.K.

Keys.—to larvae : FORNERIS (2).

STRUCTURE

Comparative anatomy.—LÖNÖY.

EVOLUTION & GENETICS

Variation.—LÖNÖY.

ECOLOGY & HABITS

Populations studies.—LÖNÖY.

PTEROBRANCHIA**GENERAL**

Textbooks. — GUTHRIE & ANDERSON p. 543.

DEVELOPMENT

Sperm.—FRANZÉN.

EVOLUTION & GENETICS

Affinities.—WHITEAR.

DISTRIBUTION

ARCTIC.—KLUGE.

ENTEROPNEUSTA**GENERAL**

Fauna lists. — English Channel : MARINE BIOLOGICAL ASSOCIATION OF THE U.K. S. Wales : BASSINDALE & BARRETT : Madras : RAO (1).

Keys.—BURDON-JONES.

Plankton. — BJÖRNBERG (2), BURDON-JONES.

STRUCTURE

Larva.—BJÖRNBERG (2).

DEVELOPMENT

Sperm.—FRANZÉN.

Fertilization.—COLWIN *et al.*

ECOLOGY & HABITS

Distribution.—RAO (1, 2).

Dispersal.—RAO (1).

DISTRIBUTION

NORTH TEMPERATE. — Mediterranean : Tornaria : BJÖRNBERG (2).

TROPICAL. — Atlantic : Tornaria : BJÖRNBERG (2); Indian Ocean : RAO (1, 2).

TUNICATA**GENERAL**

Textbooks. — GUTHRIE & ANDERSON pp. 545–9; Ascidiacea : TRÉGOUBOFF (3); Thaliacea : DAVIS, TRÉGOUBOFF (2); Larvacea : DAVIS, TRÉGOUBOFF (5).

History. — chorda dorsalis : ARZT.

Collections. — Ascidiacea : BREWIN, KOTT (1, 2), MILLAR (1, 2), PÉRÈS (1, 2); Larvacea : BJÖRNBERG & FORNERIS, TOKIOKA.

Fauna lists.—English Channel : MARINE BIOLOGICAL ASSOCIATION OF THE U.K.; Ostend, Belgium : LEFEVERE *et al.*; Germany : GRUNER; India : GIDEON *et al.*; Ascidiacea : S. Wales : BASSINDALE & BARRETT; Red Sea and Arabia : KOTT (1).

Keys. — Ascidiacea : KOTT (1); Larvacea : BJÖRNBERG & FORNERIS.

Plankton. — ALVARIÑO (1, 2), BJÖRNBERG & FORNERIS, DAVIS, FORNERIS (1), GLOVER, NAKAI *et al.*, TRÉGOUBOFF (1–5).

STRUCTURE

Adults. — Ascidiacea : neural gland : GODEAUX.

Larva, post larva. — Ascidiacea : KOTT (1), TRASON.

Nervous system. — Ascidiacea : MARKMAN.

Endoerines. — Ascidiacea : GODEAUX.

Biochemistry. — Ascidiacea : BARRINGTON.

Laboratory technique. — Ascidia-
cea : DALCQ.

Cytology, histochemistry.—Asci-
diacea : DALCQ, GODEAUX, MIN-
GANTI (2), IVANOVA-KASAS, MAN-
CUSO, SCOTT.

Electron micrography. — Asci-
diacea : heart muscle : KAWAGUTI &
IKOMOTO.

PHYSIOLOGY

Feeding mechanisms. — Ascidia-
cea : BARRINGTON, BARRINGTON &
FRANCHI.

Circulation, heart. — Ascidia-
cea : EBARA (1-5).

Excretion.—Ascidia- : GOOD-
BODY.

Hormones. — Ascidia- : BAR-
RINGTON & FRANCHI.

Growth. — Ascidia- : OKA &
USUI, SABBADIN (1).

Regeneration. — Ascidia- : BAR-
RINGTON, BARRINGTON & FRANCHI,
BERG, VINCENTIIS (2).

Enzymes. — Ascidia- : VIN-
CENTIIS.

Phagocytosis. — Ascidia- : GOD-
EAUX.

House building. — Ascidia- :
OKA & USUI.

Radiation effects. — Ascidia- :
GROSCH & SMITH.

REPRODUCTION & SEX

Asexual reproduction. — Ascidia-
cea : OKA (1), OKA & WATANABE
(2, 3), SABBADIN (1), SCOTT.

Fertility, autosterility. — Asci-
diacea : GROSCH & SMITH, ORTOLANI
(2).

Ovoviviparity. — Ascidia- :
TRASON.

Breeding season. — Ascidia- :
BREWIN.

Breeding cycle. — Ascidia- :
DIEHL.

DEVELOPMENT

Egg, oogenesis. — Ascidia- :
TRASON.

Sperm.—FRANZÉN.

Fertilization.—Ascidia- : DALCQ,
GROSCH & SMITH, ORTOLANI (1-3).

Cleavage.—Ascidia- : BERG,
DALCQ.

Embryology. — Ascidia- :
DALCQ, IVANOVA-KASAS, TRASON.
Chemical embryology. — Asci-
diacea : BERG, MANCUSO, ORTOLANI
(1-4), REVERBERI, VINCENTIIS (1, 2).

Organogeny. — Ascidia- : SCOTT.

Larval stages. — Ascidia- :
TRASON.

Metamorphosis.—OKA (2), TRASON.

Growth.—Ascidia- : IVANOVA-
KASAS, SABBADIN (2) ; colony fusion :
OKA & WATANABE (1).

Teratology. — Ascidia- : SAB-
BADIN (3), SCOTT.

EVOLUTION & GENETICS

Phylogeny. — BARRINGTON, WHIT-
EAR, Ascidia- : BARRINGTON &
FRANCHI.

Experimental genetics. — Asci-
diacea : OKA & WATANABE (1).

Chromosomes. — Ascidia- : MIN-
GANTI (2).

Radiation effects. — Ascidia- :
GROSCH & SMITH.

ECOLOGY & HABITS

Ecology.—Ascidia- : DIEHL,
GAUTIER, SOURIE.

Environmental factors.—Ascidia-
cea : DIEHL.

Distribution. — Thaliacea : ALVA-
RIÑO (1, 2). Larvacea : ALVARIÑO
(2) ; temperature dependence : FOR-
NERIS (1).

Growth. — Ascidia- : DIEHL.

Annual cycle. — Ascidia- :
DIEHL, SABBADIN ; Thaliacea, Lar-
vacea : GLOVER.

Population studies. — Thaliacea :
ALVARIÑO (1, 2), GLOVER, Larvacea :
ALVARIÑO (2), GLOVER.

DISTRIBUTION

MARINE

NORTH TEMPERATE.—Mediterranean : Ascidiacea : PÉRÈS (1, 2) ; Larvacea : ALVARIÑO (1, 2).

TROPICAL. — Atlantic : Ascidiacea : MILLAR (2) ; Larvacea : BJÖRNBERG & FORNERIS ; East Pacific : Larvacea : Tokioka ; Indian Ocean : Ascidiacea : KOTT (2), MILLAR (1).

SOUTH TEMPERATE. — Ascidiacea : BREWIN, KOTT (1).

GEOLOGICAL

Pliocene. — Ascidiacea : DEFLANDRE & DEFLANDRE-RIGAUD.

Oligocene. — Thaliacea : PEYER.

Lower Sarmatian of Russia.—Ascidiacea : IONKOV.

CEPHALOCHORDATA

GENERAL

Textbooks. — DAVIS, GUTHRIE & ANDERSON, TRÉGOUBOFF (4).

History.—ARZT.

Fauna lists.—English Channel : MARINE BIOLOGICAL ASSOCIATION OF THE U.K. ; S. Wales : BASSINDALE & BARRETT ; Germany : DECKERT.

Collections.—WEBB.

Plankton.—BJÖRNBERG (1), TRÉGOUBOFF (4).

STRUCTURE

Adult.—BJÖRNBERG (1), TENBAUM, WEBB.

Neurosecretion.—CECCATTY.

Nervous system.—CECCATTY.

Histology, Cytology.—CECCATTY, NOGUSA.

REPRODUCTION & SEX

Sex determination.—NOGUSA.

Sperm, spermatogenesis. — FRANZÉN, NOGUSA.

EVOLUTION & GENETICS

Phylogeny.—BJÖRNBERG (1).

Chromosomes.—NOGUSA.

DISTRIBUTION

TROPICAL. — Atlantic : BJÖRNBERG (1).

III.—SYSTEMATIC INDEX

Reference to the "Titles" is by the name(s) of the Author(s).

Phylogeny of chordates.—WHITTEAR.

BRACHIATA

POGONOPHORA

Systematic position.—IVANOV (2).

ATHECANEPHRIA

OLIGOBRACHIIDAE

fam. nov., IVANOV (1) p. 434 : type gen. *Oligobrachia*.

Oligobrachia gen. nov., IVANOV (1) pp. 434, 439 ; type sp. *O. dogieli* ; *O. dogieli* sp. nov. N.W. Pacific, IVANOV (1) pp. 434-9 figs. 1-5, embryology, IVANOV (3).

SIBOGLINIDAE

Siboglinum caulleryi sp. nov. N.W. Pacific, IVANOV (1) pp. 440-6 figs. 6-13, embryology, IVANOV (3) ; *S. cinctulum* sp. nov. N.W. Pacific, IVANOV (1) pp. 446-9 figs. 14-16 ; *S. ekmani*, IVANOV (1), embryology, JÄGERSTEN ; *S. fedotovi* sp. nov. N.W. Pacific, IVANOV (1) pp. 453-6 figs. 23-7 ; *S. minutum* sp. nov. N.W. Pacific, IVANOV (1) pp. 451-3 figs. 20-2 ; *S. pellucidum* sp. nov. N.W. Pacific, IVANOV (1) pp. 449-51 figs. 17-19 ; *S. plumosum* sp. nov. N.W. Pacific, IVANOV (1) pp. 456-61 figs. 28-30.

THECANEPHRIA

POLYBRACHIIDAE

Heptabrachia abyssicola, IVANOV (1) ; *H. gracilis* sp. nov. N.W. Pacific, IVANOV (1) pp. 461-5 figs. 31-4 ; *H. subtilis* sp. nov. N.W. Pacific, IVANOV (1) pp. 465-8 figs. 35-40.

Zenkevitchiana gen. nov., IVANOV (1) pp. 470, 475, type sp. *Z. longissima* ; *Z. longissima* sp. nov. N.W. Pacific, IVANOV (1) pp. 470-5 figs. 41-5.

LAMELLISABELLIDAE

Lamellisabella johannsoni sp. nov.
N.W. Pacific, IVANOV (1) pp. 475-483
figs. 46-52; *L. zachsi*, IVANOV (1).

SPIROBRACHIIDAE

Spirobrachia beklemischevi sp. nov.
N.W. Pacific, IVANOV (1) pp. 483-9
figs. 53-8; *S. grandis*, IVANOV (1).

PHORONIDEA

PHORONIDAE

Actinotrocha branchiata=*Phoronis mülleri*; *A. brownei*, adult unknown; *A. hippocrepi*=*P. hippocrepi*; *A. pallida*=*P. pallida*: key and distribution, FORNERIS.

Phoronis ovalis, comparative anatomy, LÖNÖY.

PTEROBRANCHIA

RHABDOPLEURIDAE

Rhabdopleura annulata; *R. compacta*; *R. grimaldi*; *R. manubialis*; *R. normanni*; *R. striata*; *R. sp.* Harmer ?=*R. annulata*; distribution and differences, KLUGE.

CEPHALODISCIDAE

Cephalodiscus sperm, FRANZÉN.

ENTEROPNEUSTA

PTYCHODERIDAE

Balanoglossus clavigerus, BJÖRNBERG (2), key to larva, distribution, BURDON-JONES.

Glossobalanus elongatus in Mediterranean and from Madras, RAO (2); *G. marginatus* distribution, BURDON-JONES; *G. sarniensis* distribution, BURDON-JONES, sperm structure, FRANZÉN.

Ptychodera bahamensis ?=*P. flava*, BJÖRNBERG (2); *P. flava* ?=*P. bahamensis*, BJÖRNBERG (2), routes of dispersal, RAO (1).

Saccoglossus kowalevskii sperm penetration, COLWIN et al.; *S. madrasensis* sp. nov. (nomen nudum) Madras, RAO (2) p. 301.

Tornaria bournei key, distribution, BURDON-JONES; *T. chierchiai* I Brazil, first records from Atlantic, ?=*T. morgani*, BJÖRNBERG (2); *T. dubia* redescribed from Algiers, BJÖRNBERG (2); *T. krohni* redescribed from Algiers, ?=*Balanoglossus clavigerus*, BJÖRNBERG (2); *T. meeki*, *T. mielcki* key, distribution, BURDON-JONES; *T. morgani*, BJÖRNBERG (2); *T. weldoni* from Trinidad, BJÖRNBERG (2).

TUNICATA

Keys to German fauna, GRUNER.

ASCIDIACEA

CLAVELINIDAE

Clavelina baudiensis sp. nov. Australia, adult and larva, KOTT (1) pp. 87-8 figs. 19-21; *C. claviformis* from Australia, larva figd., KOTT (1); *C. diminuta* sp. nov. Australia, KOTT (1) p. 89; *C. enormis* from Mozambique, larva figd., MILLAR (1), from Australia, larva figd., KOTT (1); *C. lepadiformis* sperm, FRANZÉN; *C. sigillaria* from N. Auckland, New Zealand, BREWIN.

Distaplia australiensis, KOTT (1); *D. stylifera*, KOTT (1); *D. viridis* sp. nov. Australia, adult and larva, KOTT (1) pp. 96-7 figs. 28-30.

Podoclavella australis, KOTT (1); *P. cylindrica* from Australia, larva described, KOTT (1); *P. dagysa* sp. nov. Australia, adult and larva, KOTT (1) pp. 93-4 figs. 26-7; *P. detorta* from Arabia, KOTT (2); *P. meridionalis* from Australia, larva, KOTT (1); *P. moluccensis* from Australia, larva figd., KOTT (1).

Stomozoa gen. nov., KOTT (2) p. 131, type sp. *S. murrayi*; *S. murrayi*, sp. nov. Red Sea, KOTT (2) pp. 131-4 figs. 2-8.

Stomozoinae subfam. nov., KOTT (2) p. 131, type gen. *Stomozoa*.

Sycozoa cerebriformis; *S. murrayi*, larva, KOTT (1); *S. sigillinoides*, KOTT (1), from N. Auckland, New Zealand, BREWIN; *S. tenuicaulis*, KOTT (1).

POLYCITORIDAE

Archidistoma murrayi sp. nov. Arabia, adult and larva, KOTT (2) pp. 134-5 fig. 9; *A. parva* from Australia, KOTT (1); *A. (Eudistoma) parva* from Gulf of Aden, KOTT (2).

Cystodytes dellechiaiiae from Australia, KOTT (1), PÉRÈS (1).

Distaplia bermudensis from Mediterranean, PÉRÈS (1).

Eudistoma angolanum from Australia, KOTT (1), from Sierra Leone, larva, MILLAR (2); *E. arenosum* sp. nov. Australia, adult and larva, KOTT (1) pp. 73-4 figs. 3-4; *E. caeruleum* from Mozambique, MILLAR (1); *E. costai*, PÉRÈS (2); *E. cyanea* from Australia, KOTT (1); *E. elongata* from Australia, larva figd., KOTT (1); *E. fantasiana* sp. nov. Australia, adult and larva, KOTT (1) p. 76 figs. 7-8; *E. globosum* sp. nov. Australia, adult and larva, KOTT (1) pp. 72-3 figs. 1-2; *E. mobiusi* and *E. passeroides* from Mozambique, MILLAR (1); *E. parvum* from Australia, larva figd., KOTT (1); *E. plumbeum*, PÉRÈS (1); *E. pyriforme* from Australia, larva figd., KOTT (1); *E. ramosum* from Sierra Leone, adult and larva figd., MILLAR (2); *E. rhodopyge* from Mozambique, larva figd., MILLAR (1); *E. renieri* from Australia, larva figd., KOTT (1); *E. rubrum*, PÉRÈS (1); *E. tridentatum*, PÉRÈS (2).

Paradistoma crystallinum, PÉRÈS (2).

Polycitor circes from Australia, KOTT (1); *P. giganteum* from Australia, larva figd., KOTT (1); *P. gelatinosum* sp. nov. Australia, larva figd., KOTT (1) p. 83 fig. 15; *P. longitubis* sp. nov. Australia, larva figd., KOTT (1) pp. 80-1 fig. 11; *P. mutabilis* sp. nov. Japan, OKA (1) pp. 156-9 figs. 1-9, budding and growth, OKA (1), OKA & USUI, metamorphosis, OKA (2), heart physiology, EBARA (1-3); *P. subarborensis* sp. nov. Australia, KOTT (1) pp. 81-2 fig. 14; *P. translucida* sp. nov. Australia, KOTT (1) p. 81 fig. 13.

Polycitorella mariae from N. Auckland, New Zealand. BREWIN.

Sigillina maghalensis from Australia, KOTT (1).

POLYCLINIDAE

Amaroucium areolatum, PÉRÈS (1); *A. brementi*, PÉRÈS (2); *A. circumvolutum* from N. Auckland, New Zealand, BREWIN; *A. constellatum* regeneration, SCOTT; *A. cottrelli* sp. nov. N. Auckland, New Zealand, BREWIN p. 578, fig. 1; *A. nottii*, *A. phortax* and *A. thomsoni* from N. Auckland, BREWIN; *A. turbinatum* ecology, GAUTIER.

Aplidium altarium from Mozambique, larva figd., MILLAR (1); *A. caeruleum* var. *argelense*, PÉRÈS (1); *A. lubricum* from Mozambique, larva figd., MILLAR (1); *A. peirense* from Mozambique, *A. savignyi* var. *translucidum* var. nov. Arabia; Kuria Muria Islands, KOTT (2) pp. 142-3; *A. violaceum* from Arabia, larva figd., KOTT (2).

Euherdmania australis sp. nov. Australia, KOTT (1) pp. 103-4; *E. claviformis* larval structure and development, TRASON.

Macroclinum arenaceum from N. Auckland, New Zealand, BREWIN; *M. calypsonis*, PÉRÈS (1); *M. dubosqi*, PÉRÈS (2); *M. lacazei* sp. nov. E. Mediterranean, PÉRÈS (1) pp. 180-1 fig.; *M. seneglese*, PÉRÈS (1).

Morchellium argus neural gland, GODEAUX.

Parascidia arcolata and *P. turbinatum* neural gland, GODEAUX.

Polyclinum macrophyllum from Mozambique, larva figd., MILLAR (1).

Psammaplidium pedunculatum = *Ritterella herdmania* nec *R. pedunculata*, KOTT (1).

Pseudodistoma australis sp. nov. Australia, adult and larva, KOTT (1) pp. 101-2 fig. 32; *P. cynrusense*, PÉRÈS (1, 2).

Ritterella dispar sp. nov. Australia, adult and larva, KOTT (1) p. 102 figs. 33-4; *R. herdmania* nom. nov. for *Psammaplidium pedunculatum* nec *R. pedunculata*, Australia, KOTT (1).

Sidneiodes ivicense sp. nov. E. Mediterranean, PÉRÈS (2) pp. 227-9 fig. 1; *S. tamaranae* from Australia, larva, KOTT (1).

Sigillinaria aurea sp. nov. N. Auckland, New Zealand, larva and adult, BREWIN p. 580 fig. 2; *S. opaca* from N. Auckland, BREWIN.

Syncoicum hypurgon var. *arenosum* var. nov. Arabia, KOTT (2) p. 141; *S. pulmonaria* sperm, FRANZÉN.

DIDEMNIDAE

Didemnopsis sansibaricum from Mozambique, MILLAR (1).

Didemnum candidum from Arabia, KOTT (2), from N. Auckland, New Zealand, BREWIN, PÉRÈS (1, 2); *D. chondrilla* from N. Auckland, BREWIN; *D. dentatum*, PÉRÈS (2); *D. fulgens*, PÉRÈS (1, 2); *D. lahillei*, PÉRÈS (1); *D. maculosum*, PÉRÈS (1); *D. moseleyi* from Arabia, KOTT (2); *D. paradoxum* adult and larva redescribed and figd., BREWIN; *D. psammatodes* from Mozambique, MILLAR (1), var. *ianthinum* from Arabia, larva figd., KOTT (2), var. *maculatum* from N. Auckland, BREWIN.

Diplosoma modestum from Mozambique, larva figd., MILLAR (1); *D. spongiforme* from Red Sea, KOTT (2).

Lissoclinum bataillonii, PÉRÈS (2); *L. capense* from Arabia, KOTT (2).

Leptoclinides diemensis from N. Auckland, New Zealand, BREWIN.

Leptoclinum as fouling organism, MAWATARI & KOBAYASHI (1, 2).

†*Micrascidites* gen. nov., DEFLANDRE & DEFLANDRE-RIGAUD p. 48 figs. 1-5, type sp. *M. vulgaris*; *M. vulgaris* sp. nov. fossil Pliocene Paris and Australia, spicules, DEFLANDRE & DEFLANDRE-RIGAUD p. 48 figs. 1-5.

Polysyncraton lacazei, PÉRÈS (1, 2).

Trididemnum aspiculatum sp. nov. Arabia: Kuria Muria Islands, KOTT (2) pp. 139-40; *T. lüderitzi* from Arabia, KOTT (2); *T. tenerum*, PÉRÈS (1, 2), sperm, FRANZÉN.

DIAZONIDAE

Rhopalaea neapolitana, PÉRÈS (1, 2).

Rhopalopsis hartmeyerii, PÉRÈS (2).

CIONIDAE

Ciona intestinalis, chemical embryology, BERG, chromosomes, MINGANTI (2), embryology, ORTOLANI (2, 4), excretion, GOODBODY, heart muscle, electron micrography, KAWAGUTI & IKOMOTO, iodine in endostyle, BARRINGTON, BARRINGTON & FRANCHI, life cycle, SABBADIN (2), nervous system, MARKMAN, sperm, FRANZÉN; *C. savignyi*, PÉRÈS (2).

PEROPHORIDAE

Ecteinascidia turbinata ecology, SOURIE.

Perophora orientalis heart beat, EBARA (4, 5); *P. viridis* from Sierra Leone, MILLAR (2).

CORELLIDAE

Corella eumoyta from N. Auckland, New Zealand, BREWIN; *C. parallelogramma*, PÉRÈS (2), sperm, FRANZÉN.

ASCIDIIDAE

Ascidia arenosa from Mozambique, MILLAR (1); *A. aspersa*, PÉRÈS (1); *A. conchilega*, PÉRÈS (2), ecology, GAUTIER; *A. incrassata* from Mozambique, MILLAR (1); *A. malaca* chromosomes, MINGANTI (2), from Red Sea, KOTT (2); *A. melanostoma* from Red Sea, KOTT (2); *A. mentula*, PÉRÈS (1, 2), chromosomes, MINGANTI (2); *A. oblique* sperm, FRANZÉN; *A. virginea*, PÉRÈS (2), sperm, FRANZÉN.

Ascidella aspersa chromosomes, MINGANTI (2), experimental embryology, DALCQ, excretion, GOODBODY, sperm, FRANZÉN; *A. pellucida*, PÉRÈS (1, 2); *A. senegalensis* from Sierra Leone, MILLAR (2).

Phallusia mammillata, PÉRÈS (1, 2), chromosomes, MINGANTI (2), chemical embryology, MANCUSO, VINCENTIIS (2), embryology, ORTOLANI (1, 3, 4).

BOTRYLLIDAE

Botrylloides nigrum from Red Sea, KOTT (2); *B. violaceum* as a fouling organism, MAWATARI & KOBAYASHI (1, 2).

Botryllus communis budding, OKA & WATANABE (3); *B. magnicoecus* from N. Auckland, New Zealand, BREWIN; *B. planus* from Mozambique, MILLAR (1); *B. primigenus* budding, OKA & WATANABE (2, 3), colony specificity, OKA & WATANABE (1); *B. schlosseri* budding, SABBADIN (1).

Polyandrocarpa inhacae sp. nov. Mozambique, MILLAR (1) pp. 927-9 fig. 14; *P. tinca* from Mozambique, MILLAR (1).

Symplegma viride from Mozambique, MILLAR (1).

STYELIDAE

Arnbäckia novae-zealandicae from North Auckland, BREWIN.

Boltenia echinata sperm, FRANZÉN.

Cnemidocarpa bicornuata, *C. mada-gascariensis* var. *regalis* and *C. nisiotis* from N. Auckland, New Zealand, BREWIN.

Dendroda grossularia embryology, IVANOVA-KASAS, sperm, FRANZÉN.

Okamia thilenii from N. Auckland, New Zealand, BREWIN.

Polycarpa aurita and *P. cryptocarpa* from Arabia, KOTT (2); *P. fibrosa*, PÉRÈS (1); *P. pomaria*, PÉRÈS (1, 2), sperm, FRANZÉN; *P. thelypanes* from Red Sea, KOTT (2); *P. translucida* from Sierra Leone, MILLAR (2).

Styela canopus from Red Sea, KOTT (2); *S. coriacea* ecology, DIEHL; *S. marquesana* from Mozambique, MILLAR (1); *S. partita*, PÉRÈS (1, 2), sperm, FRANZÉN; *S. plicata* life cycle SABBADIN (2); *S. rustica* sperm, FRANZÉN.

Syncarpa longicaudata sp. nov. Kuril Islands, SKALKIN pp. 297-9.

Theodorella torus from N. Auckland, New Zealand, BREWIN.

PYURIDAE

Halocynthia papillosa, PÉRÈS (1, 2).

Herdmania momus from Mozambique, MILLAR (1), from the Red Sea, KOTT (2).

Microcosmus kura from N. Auckland, New Zealand, BREWIN; *M. sulcatus*, PÉRÈS (2).

Pyura cancellata and *P. pulla* from N. Auckland, New Zealand, BREWIN.

P. sansibarica from Mozambique, MILLAR (1); *P. subuculata* and *P. trita* from N. Auckland, BREWIN.

MOLGULIDAE

Otenicella appendiculata var. *korotneffi*, PÉRÈS (1).

Eugyra arenosa sperm, FRANZÉN; *E. (Gamaster) peresi* sp. nov. Sierra Leone, MILLAR (2) pp. 374-5 fig. 5.

Molgula citrina sperm, FRANZÉN; *M. manhattensis* life cycle, SABBADIN (2), excretion, GOODBODY, radiation damage, GROSCHE & SMITH; *M. mortenseni* from N. Auckland, New Zealand, BREWIN; *M. tubifera* from Ostend, Belgium LEFEVERE et al.

HEXACROBYLIDAE

Hexacrobylus sp. from Arabia, KOTT (2).

THALIACEA

PYROSOMIDA

Pyrosoma atlanticum, TRÉGOUBOFF (1).

DOLIOLIDA

Doliioletta mirabilis from E. Atlantic, ALVARIÑO (2), from W. Mediterranean, ALVARIÑO (1).

Doliolum denticulatum and *D. gegenbauri* from E. Atlantic, ALVARIÑO; *D. nationalis* from Mediterranean, TRÉGOUBOFF (1), ALVARIÑO (1), from E. Atlantic, ALVARIÑO (2).

SALPIDA

†*Protornis glaronensis* shown to be fossil salp of Oligocene, PEYER.

Salpa fusiformis, ALVARIÑO (2), from N. Sea, GLOVER; *S. maxima* from E. Atlantic, ALVARIÑO (2); *S. virgula* sperm, FRANZÉN.

LARVACEA

OIKOPLEURIDAE

Haplopleura longicauda from Trinidad, BJÖRNBERG & FORNERIS.

Megalocercus abyssorum from Algiers, TRÉGOUBOFF.

Oikopleura cophocerca from Trinidad, BJÖRNBERG & FORNERIS; *O. dioica* from N. Sea, GLOVER, from Ostend, Belgium, LEFEVRE *et al.*, from Trinidad, BJÖRNBERG & FORNERIS; *O. fusiformis* from Trinidad, BJÖRNBERG & FORNERIS; *O. labradorensis* from N. Sea, GLOVER; *O. parva* and *O. rufescens* from Trinidad, BJÖRNBERG & FORNERIS.

Sinisteroffia gen. nov., TOKIOKA p. 360, type sp. *S. scrippsi*; *S. scrippsi* sp. nov. Peru, TOKIOKA pp. 360-3 figs. 1-2.

Stegosoma magnum from Trinidad, BJÖRNBERG & FORNERIS.

FRITILLARIIDAE

Fritillaria aequatorialis anatomy, TOKIOKA, from Trinidad, BJÖRNBERG

& FORNERIS; *F. aplostoma*, *F. borealis*, *F. formica*, *F. megachile*, *F. messanensis* and *F. pellucida* from Trinidad, BJÖRNBERG & FORNERIS; *F. taeniogona* sp. nov. Tropical E. Pacific, TOKIOKA pp. 363-4 figs. 3-4.

CEPHALOCHORDATA

Amphioxides pelagicus from Brazil, BJÖRNBERG (1).

Amphioxus neurosecretion, CEC-CATTY.

Branchiostoma arabiae sp. nov. Arabia and Red Sea, WEBB pp. 122-6 fig. 1; *B. belcheri* redescribed and figd., WEBB, chromosomes, NOGUSA; *B. lanceolatum* from Arabia, WEBB, sperm, FRANZÉN, structure, TENBAUM.

